
INTRODUCTION

This Deployment Fact Sheet Book highlights recent progress by DOE's Office of Environmental Management (EM) in deploying new technologies in the environmental cleanup of the DOE complex. To accelerate the use of new technology in the cleanup effort, EM's management of science and technology investments has evolved from a focus primarily on technology development prior to FY96 to the more recent thrust toward deployment. This shift was made during a period when EM's investments in science and technology (S&T) dropped by over 40%, making it imperative that EM make highly focused investments on higher priority S&T activities. To help accomplish this, EM completed and published *Accelerating Cleanup: Paths to Closure* (June 1998), a detailed complex-wide projection of the technical scope, cost and schedule required to complete the cleanup mission. Based on these projections, sites have identified specific science and technology needs that must be met to enable or improve cleanup, accelerate the schedule, or reduce cost. EM has established Focus Areas (teams) that address each of EM's major problem areas. Through a Focus Area-centered approach, EM is now integrating science, technology, and deployment activities and cleanup projects to meet the short- and long-term needs of the EM cleanup mission. The purpose of this book is to summarize EM's recent progress in deployment of innovative technologies across the complex. The book includes the following:

- **Introduction**
- **Section 1:** Deployment Overview and Analysis—A text and graphical summary of EM deployment activities and progress from FY91 to present.
- **Section 2:** Deployment Matrix – Tabulation of OST technology deployments by fiscal year and Field Office/location.
- **Section 3:** Deployment Fact Sheets for FY95-FY98 – Brief summaries of deployment information for each OST technology deployed.
- **Section 4:** Glossary of Technical Terms

Definition Used for Technology Deployment

EM defines technology deployment as “the use of a technology or technology system toward accomplishment of one or more site-specific DOE Environmental Management program cleanup objectives as applied to the actual waste requiring management at the site.” A deployment is counted as accomplished in the fiscal year in which it begins. This definition is consistent with contributing to the accomplishment of EM's performance measures, and the application of technology to actual site wastes and cleanup activities.

Role of Performance Measures and Deployment

In September 1997, EM agreed to use technology deployment as a Corporate Performance Measure. EM has been making great strides in recent years toward meeting these goals and accelerating the pace of technology deployments to meet future cleanup goals.

Congressional support and a corporate culture that encourages aggressive deployment means EM can achieve the ambitious goals established by the *Paths to Closure* .

Data Quality and Validation Efforts

EM continually works to improve the quality of deployment data. Starting in FY98, EM began constructing Deployment Fact Sheets for every technology deployment that occurred from FY95 through FY98. These Deployment Fact Sheets reside in EM's Technology Management System (TMS). You can log onto the system at <http://ost.em.doe.gov/tms> and search technologies by their OST Reference Numbers.

Of the Deployment Fact Sheets completed to date, highest priority has been placed on those prepared for FY98. This is the first year that the Focus Areas were able to build the fact sheets directly in the TMS. The data fields in the TMS Deployment Fact Sheet Builder indicate what information is needed and in what form. This system greatly aids data collection, publication, and quality verification. After the Focus Areas entered data into the system, reports were sent to the DOE Field Offices for verification. The Field Offices were responsible for agreeing or disagreeing with the deployment claims and ensuring the accuracy of the information.

The information for deployments occurring during the period FY95 through FY97 is being updated as new information is identified. Good data are available for those technologies that are still being deployed and/or are commercially available. However, some technologies are no longer being used because more efficient approaches have been developed. For inactive technologies, it can be difficult to obtain accurate historical deployment-related information. Deployment information may not have been collected because specific data requirements (i.e., what data is needed for certain sections of a Deployment Fact Sheet) have only recently been fully defined. Reconstructing this data is further complicated by the fact that some points of contact knowledgeable about past deployments are no longer with the program.

Additional intensive data verification efforts have been applied to claimed deployments of OST technologies particularly those in FY98. The Office of Science and Technology (OST) continues to seek ways to improve the quality of deployment data and verify the accuracy and completeness of current and future deployment information. References in this document to "verified" FY98 OST deployments reflect this additional scrutiny.

The source data for this Deployment Fact Sheet Book is based on information in TMS. A copy of the live TMS data base was extracted and archived on February 19, 1999 and reflects the OST deployment status as of that date. Any updates to OST deployment information within TMS will be reflected in the next issue of the Deployment Fact Sheet Book.